

JAPAN

EDICT OF GOVERNMENT

In order to promote public education and public safety, equal justice for all, a better informed citizenry, the rule of law, world trade and world peace, this legal document is hereby made available on a noncommercial basis, as it is the right of all humans to know and speak the laws that govern them.

JIS D 9453 (2010) (English): Bicycles -- Luggage carriers and stands

ISO INSIDE

安

The citizens of a nation must honor the laws of the land.

Fukuzawa Yukichi

信

BLANK PAGE

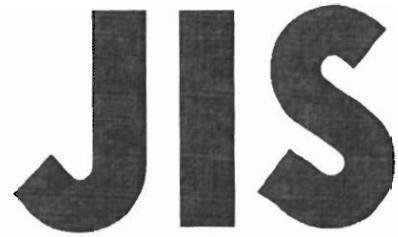


PROTECTED BY COPYRIGHT

BLANK PAGE



PROTECTED BY COPYRIGHT



JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS D 9453 : 2010

(JBPI)

Bicycles — Luggage carriers and stands

ICS 43.150

Reference number : JIS D 9453 : 2010 (E)

D 9453 : 2010

Date of Establishment: 1961-11-01

Date of Revision: 2010-05-20

Date of Public Notice in Official Gazette: 2010-05-20

Investigated by: Japanese Industrial Standards Committee
Standards Board
Technical Committee on Consumer Life Products

JIS D 9453 : 2010, First English edition published in 2011-10

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

© JSA 2011

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized
in any form or by any means, electronic or mechanical, including photocopying and microfilm, without
permission in writing from the publisher.

Printed in Japan

NH/HN

Contents

	Page
Introduction	1
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Names of parts	3
5 Classification of carriers	3
6 Strength	3
6.1 Strength of carrier	3
6.2 Strength of stand	4
7 Construction and function	4
8 Shapes and dimensions	5
9 Plating	5
10 Painting	5
11 Appearance	6
12 Test method	6
12.1 Test method for strength of carrier	6
12.2 Test method for strength of stand	10
13 Marking	10
13.1 Marking on carriers	10
13.2 Marking on stands	11
14 Instruction manual	11
14.1 Instruction manual for carriers	11
14.2 Instruction manual for stands	12
Annex JA (informative) Comparison table between JIS and corresponding International Standards	16

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Bicycle Promotion Institute (JBPI)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently JIS D 9453:2007 is replaced with this Standard.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

Bicycles — Luggage carriers and stands

Introduction

This Japanese Industrial Standard has been prepared based on the first edition of ISO 11243 published in 1994 by modifying some of its technical contents to correspond to the current situation in Japanese market.

The portions given continuous sidelines or dotted underlines are the matters in which the contents of the original International Standard have been modified. A list of modifications with explanations is given in Annex JA.

1 Scope

This Standard specifies luggage carriers (hereafter referred to as "carriers") and stands mainly used for bicycles for general use, bicycles for young children and motor assisted cycles as specified in JIS D 9111.

NOTE : The International Standard corresponding to this Standard and the symbol which denotes the degree of correspondence are as follows :

ISO 11243 : 1994 *Cycles — Luggage carriers for bicycles — Concepts, classification and testing* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and JIS are IDT (identical), MOD (modified), and NEQ (not equivalent) according to ISO/IEC Guide 21-1.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 0205-1 *ISO general purpose metric screw threads — Part 1 : Basic profile*

JIS B 0205-2 *ISO general purpose metric screw threads — Part 2 : General plan*

JIS B 0205-3 *ISO general purpose metric screw threads — Part 3 : Selected sizes for screws, bolts and nuts*

JIS B 0205-4 *ISO general purpose metric screw threads — Part 4 : Basic dimensions*

JIS B 0209-1 *ISO general purpose metric screw threads — Tolerances — Part 1 : Principles and basic data*

- JIS B 0209-2 *ISO general purpose metric screw threads — Tolerances — Part 2 : Limits of sizes for general purpose external and internal screw threads — Medium quality*
- JIS B 0209-3 *ISO general purpose metric screw threads — Tolerances — Part 3 : Deviations for constructional screw threads*
- JIS B 1501 *Rolling bearings — Balls*
- JIS D 0202 *General rules of coating films for automobile parts*
- JIS D 9101 *Cycles — Terminology*
- JIS D 9111 *Cycles — Classification and essential characteristics*
- JIS H 8610 *Electroplated coatings of zinc on iron or steel*
- JIS H 8617 *Electroplated coatings of nickel and chromium*

3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in JIS D 9101 and the following apply.

3.1 carrier

a device mounted above the rear wheel of a bicycle for loading luggage

Some devices are designed for carrying young children in child-seats.

3.2 carrier platform

flat part of the carrier upon which luggage may be loaded or fixed

If the carrier is equipped with more than one such area, only the uppermost is considered.

3.3 length of carrier *L*

maximum overall length of the carrier measured between the front and rear extremities, including means of attachment to the bicycle measured up to the attachment point, but excluding accessories such as reflectors

3.4 full stand

a device to maintain a bicycle in the upright position by a stand which supports the bicycle from both sides of the wheel so that the bicycle does not fall (see figure 5)

3.5 single prop stand

a device which is a stand against which a bicycle can be propped so that it does not fall (see figure 6)

4 Names of parts

Names of principal parts of carriers and stands shall be as shown in figure 4 to figure 6.

5 Classification of carriers

Carriers are classified into load classes as shown in table 1.

Table 1 Load classes of carriers

Load class	Description (maximum loading mass and attachment of child-seat)
Class 10	Loading carriers of maximum loading mass up to 10 kg. Not designed for attachment of child-seat.
Class 18	Loading carriers of maximum loading mass up to 18 kg. Not designed for attachment of child-seat.
Class 25	Loading carriers of maximum loading mass up to 25 kg. When attaching a child-seat, the total of mass of the child-seat and the maximum applicable body weight designated by the child-seat should not exceed 25 kg.
Class 27	Loading carriers of maximum loading mass up to 27 kg. When attaching a child-seat, the total of mass of the child seat and the maximum applicable body weight designated by the child-seat should not exceed 27 kg.
Class S	Loading carriers of maximum loading mass 27 kg or over, which is specified by the manufacturer of the carrier. When attaching a child-seat, the total of mass of the child-seat and the maximum applicable body weight designated by the child-seat should not exceed the specified value.

6 Strength

6.1 Strength of carrier

6.1.1 Temperature resistance

The temperature resistance shall be as follows.

- a) **General** The temperature resistance shall apply to carriers of synthetic resin or those that are partially synthetic resin.
- b) **High temperature resistance** For the high temperature resistance, when the test is performed in accordance with 12.1.1 b), there shall be no damage or distortion which affects the function or safety of the carrier.
- c) **Low temperature resistance** For the low temperature resistance, when the test is performed in accordance with 12.1.1 c), there shall be no damage or distortion which affects the function or safety of the carrier.
- d) **Low temperature impact resistance** For the low temperature impact resistance, when the test is performed in accordance with 12.1.1 d), there shall be no damage

or distortion which affects the function or safety of the carrier.

6.1.2 Static load strength

The static load strength shall be as follows.

- a) **Vertical** For the static load strength in the vertical direction, when the test is performed in accordance with 12.1.2 a), the permanent distortion of the carrier shall not exceed 5 mm.
- b) **Lateral** For the static load strength in the lateral direction, when the test is performed in accordance with 12.1.2 b), the deflection of the carrier shall not exceed 15 mm. Furthermore, the permanent distortion after the removal of force shall not exceed 5 mm.

6.1.3 Dynamic load strength

The dynamic load strength shall be as follows.

- a) **Vertical** For the dynamic load strength in the vertical direction, when the test is performed in accordance with 12.1.3 a), there shall be no faults such as excessive fractures and cracks on any part of the carrier.
- b) **Lateral** For the dynamic load strength in the lateral direction, when the test is performed in accordance with 12.1.3 b), there shall be no faults such as excessive fractures and cracks on any part of the carrier.

6.2 Strength of stand

6.2.1 Repeating operation fatigue

For the repeating operation fatigue, when the test is performed 5 000 times in accordance with 12.2.1, there shall be no excessive play, incomplete actuation, fracture or the like on any part of stand.

6.2.2 Static load strength of full stand

For the static load strength of full stand, when the test is performed in accordance with 12.2.2, the stand lock shall not be released. The permanent distortion of the stand shall not exceed 5 mm.

6.2.3 Static load strength of single prop stand

For the static load strength of single prop stand, when the test is performed in accordance with 12.2.3, the stand lock shall not be released except for those without the stand lock. Furthermore, the permanent distortion of the stand shall not exceed 10 mm.

7 Construction and function

The construction and function of carriers and stands shall be as follows.

- a) Every joint, fixing and assembly shall be secure.
- b) When a stand is mounted on a bicycle, it shall allow the user to operate easily.

Furthermore, the bicycle shall maintain sufficient stability and not readily fall down from the standing position.

- c) When a single prop stand or a full stand is mounted on a bicycle, and with the stand being in the in running state and the front wheel fixed to the ground, the rear wheel is raised to a height of 200 mm and then allowed to fall freely, the end of the stand shall not contact with the ground surface.

8 Shapes and dimensions

Examples of shapes and main dimensions of carriers and stands shall be as shown in figure 4, figure 5, figure 6 and table 4. Dimensions are recommended values. The screw threads shall be as specified in JIS B 0205-1 to JIS B 0205-4, and the dimensional permissible limits and tolerances shall be 6H/6g of the tolerance class specified in JIS B 0209-1 to JIS B 0209-3 and upward.

The width, W of the platform of the carrier suitable for attachment of child-seat shall be 120 mm to 175 mm.

9 Plating

The plated surfaces of carriers and stands shall be as follows.

- a) The thickness and corrosion resistance of nickel plating or nickel-chromium plating shall be Grade 3 of table 1 and table 2 specified in JIS H 8617 and upward except for corners, threaded portions, springs and parts not exposed after assembly.

For those plated with chromium, the thickness of chromium layer shall be at least 0.05 μm .

- b) Those plated with zinc chromium shall be Grade 2 of table 1 specified in JIS H 8610 and upward except for corners, threaded portions, springs and parts not exposed after assembly.

10 Painting

The painted surfaces of carriers and stands shall be as follows.

- a) When subjected to a pencil scratch resistance test using a pencil of lead type F according to the specifications of JIS D 0202, there shall be no breakage of paint film on the tested surface.
- b) When a steel ball of 1/2 in nominal size specified in JIS B 1501 is made to drop on the painted surface vertically from a height of 1 500 mm, there shall be no peelings, cracks or the like on the impacted surface.

11. Appearance

The appearance of carriers and stands shall be as follows.

- a) There shall be no sharp tips, fins, burrs or the like on any part.
- b) There shall be no exposure of substrate, peelings, rust or other excessive defects on the plated or painted surfaces.
- c) There shall be no rust, cracks or other excessive defects on the machined surfaces to which plating or painting is not applied.
- d) Marks etc. shall be free from incomplete adhesion, incomplete stamping, positional deviation or the like.

12 Test method

12.1 Test method for strength of carrier

12.1.1 Temperature resistance

The temperature resistance shall be as follows.

- a) **General** The tests are applied to carriers of synthetic resin or those of partially synthetic resin to determine whether the alteration of temperature conditions have an adverse effect on the strength and the form of the carriers.

The low temperature impact resistance test simulates the impact of the carrier against the ground when the bicycle to which it is mounted falls over. The tests of b) to d) shall be performed as preparation tests for the static load strength and the dynamic load strength tests.

- b) **High temperature resistance test** Store the carrier for a minimum of 3 h in a chamber with a temperature of 65 °C. Remove it and immediately examine its appearance.
- c) **Low temperature resistance test** Store the carrier for a minimum of 3 h in a chamber with a temperature of -20 °C. Remove it and immediately examine its appearance.
- d) **Low temperature impact resistance test** Store the carrier for a minimum of 3 h in a chamber with a temperature of -20 °C. Remove it and immediately drop it from a height of 1 m on a concrete floor in a direction chosen to produce the worst result and examine its appearance.

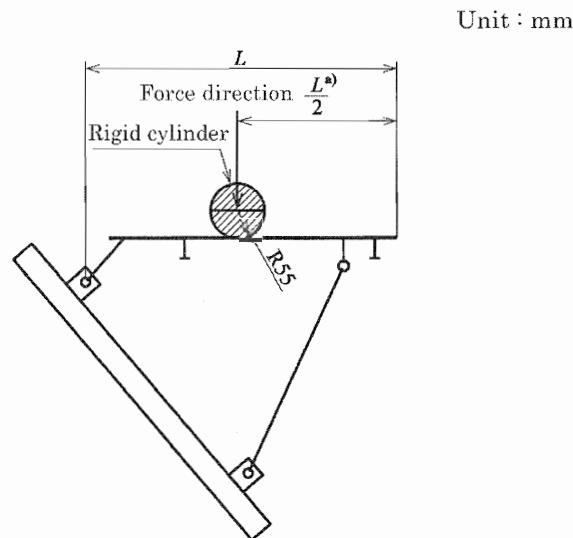
12.1.2 Static load strength

The static load strength shall be as follows.

- a) **Vertical** Secure the carrier to a testing fixture as shown in figure 1. Place a rigid cylinder of 55 mm radius transversely on the carrier platform, and apply a load which is 30 times the rated load of the load class of the carrier (for example, $18 \times 30 = 540$ N for Class 18, i.e. equal to three times the maximum loading mass of the

carrier) either to a point of a distance $L/2$ from the rear of the carrier or to a point chosen to produce the greatest deflection (excluding any point less than 50 mm from the rear of the carrier) for 1 min. After removal of the load, measure the permanent distortion of the carrier at its point of application in millimetres.

Where the carrier has a support member in the middle of the platform, another point of application may be chosen for the load in order to find the worst case.



Note a)^{a)} Location where the greatest deflection is produced.

Figure 1 Static load strength test in vertical direction

- b) **Lateral** Secure the carrier to a testing fixture with the carrier platform horizontal as shown in figure 2. Apply a force 10 times the rated load of the load class of the carrier (for example, $18 \times 10 = 180$ N for Class 18, i.e. equal to the maximum loading mass of the carrier) for 1 min to the side of the carrier platform at a point 50 mm from the rear of the carrier. Measure the deflection at the point of application in millimetres. Furthermore, measure also the permanent distortion after the removal of this force.

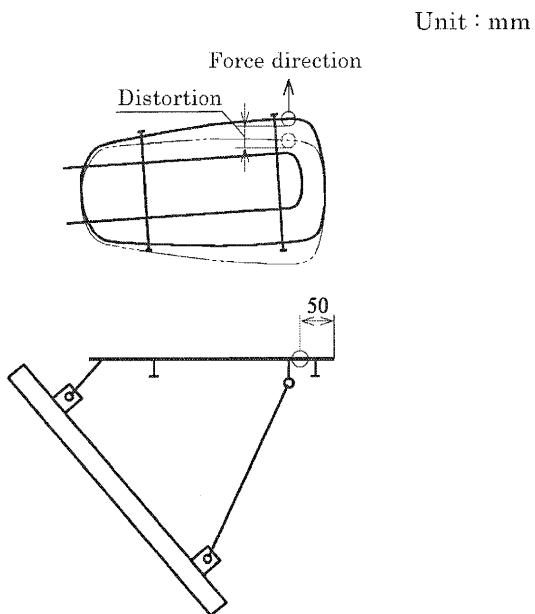


Figure 2 Static load strength test in lateral direction

12.1.3 Dynamic load strength

The dynamic load strength shall be as follows.

- a) **Vertical** Secure the carrier to a fixture with the platform horizontal as shown in figure 3. Attach a weight equal to the rated load of the relevant load class (for example, 18 kg for Class 18) to the carrier platform at a distance $D = L/2$ so that load is uniformly applied through the platform width. Vibrate the assembly under the conditions given in table 2, and examine the appearance of the carrier.

The centre of mass of the weight shall lie within 10 mm of the centreline of the top of the carrier platform, and the total width of the weight shall not exceed the carrier platform width by more than 100 mm.

Table 2 Dynamic load strength test conditions in vertical direction

Amplitude	mm	5
Frequency	Hz	7
Acceleration at vibrated part	m/s^2	9.8
Number of vibration	50 000	
NOTE : If resonance occurs, the frequency shall be reduced by 10 %, and the amplitude increased by 23 %.		

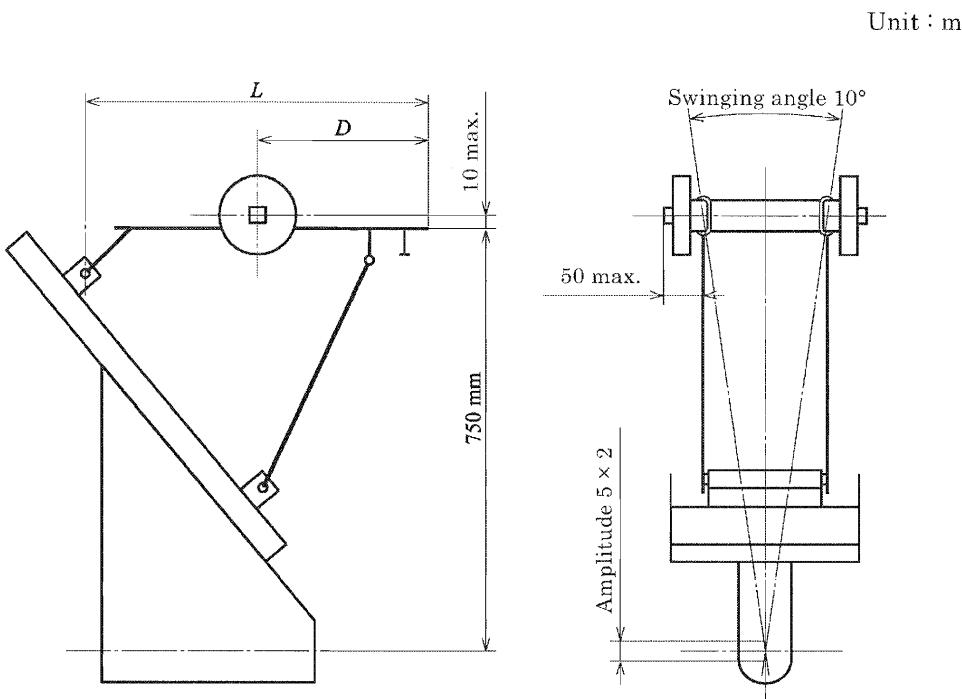


Figure 3 Dynamic load strength test

- b) **Lateral** Secure the carrier to the fixture as shown in figure 3. Attach a weight equal to the rated load of the relevant load class (for example, 18 kg for Class 18) to the carrier platform at a distance $D=100$ mm so that the load is applied uniformly through the platform width. Vibrate the carrier laterally under the conditions given in table 3 by swinging it from side to side, through a total arc of 10° with respect to a horizontal longitudinal axis 750 mm below the carrier platform, and then examine the appearance of the carrier.

The centre of mass of the weight shall lie within 10 mm of the centreline of the top of the carrier platform, and the total width of the weight shall not exceed the carrier platform width by more than 100 mm.

Table 3 Dynamic load strength test conditions in lateral direction

Swinging angle	°	10
Frequency	Hz	1
Acceleration at vibrated part	m/s^2	2.6
Number of vibration		50 000

12.2 Test method for strength of stand

12.2.1 Repeating operation fatigue test Secure a stand to the fixture in unlocked state and examine the appearance and operating state after repeating the kick-up-stand operation of the stand 5 000 times at a rate of 10 times to 15 times per minute.

Prior to the test, lubricate the rotating or sliding parts adequately with grease.

12.2.2 Static load strength of full stand Mount the full stand in locked state on a testing frame or a testing fixture. With the lower ends of the props clamped to the fixture, apply a force of 200 N by a spring balance or the like at the centre of the fixture in the kick-up direction. At this time, locking shall not be released.

Further, set the reference point by applying a force of 20 N at the centre of the fixture in the reverse direction. Then apply an additional force of 200 N for 1 min and measure the permanent distortion after removal of the force at the reference point in millimetres.

12.2.3 Static load strength of single prop stand With the single prop stand in locked state, apply a force of 100 N by means of a spring balance or the like on the lower end of the prop in the kick-up direction. At this time, the locking shall not be released.

Further, mount a single prop stand on a testing frame or testing fixture. Set the reference point by applying a force of 20 N by means of a spring balance or the like at the prop lower end in a right direction to the prop laterally outward with respect to the centre plane of the testing fixture. Then apply an additional force of 150 N for 1 min and measure the permanent distortion after removal of the force at the reference point in millimetres.

13 Marking

13.1 Marking on carriers

Carriers shall be marked indelibly on its surface by means of stamping, a seal,etc. with the following particulars.

a) Maximum loading mass (10, 18, 25, 27 or S + mass) "kg"

Example 1 25 kg

Example 2 S 30 kg

b) For carriers suitable for attachment of a child-seat, the indication that it can be used with an attached child-seat shall be given. For carriers not suitable for attachment of a child-seat, the indication that attaching a child-seat is not possible shall be given.

c) Manufacturer's name or its abbreviation

d) Date of manufacture or its abbreviation

13.2 Marking on stands

Stands shall be marked indelibly on its surface by means of stamping or the like with the following particulars.

- a) Manufacturer's name or its abbreviation
- b) Date of manufacture or its abbreviation

14 Instruction manual

The carrier or the stand, unless they are supplied together with or already mounted on a bicycle, shall be provided with instructions for mounting on a bicycle as shown below.

14.1 Instruction manual for carriers

The following information shall be included in the instruction manual of carrier.

- a) Instruction to refer to the instruction manual for the loading mass of the carrier in question and whether it can be attached to a bicycle or not
- b) Mounting method and mounting position of the carrier on bicycle and recommended torque for fasteners
- c) Whether it is suitable for attachment of a child-seat or not
- d) Warning concerning loading luggage
 - 1) Warning that the running stability and braking performance of bicycle may be affected by the loaded luggage
 - 2) Warning to observe the maximum loading mass
 - 3) Warning that, when attaching a child-seat, the instruction manual of the bicycle, carrier and the child-seat are to be followed, and the total of mass of the child-seat and the maximum applicable body weight designated by the child-seat should not exceed the maximum loading mass of the carrier
- e) Warning to ensure that any luggage or child-seat fitted to the carrier is securely fitted in accordance with the manufacturer's instructions and that there is no loose straps that can get caught in the rear wheel
- f) Instruction that the fasteners are to be secured and checked frequently, and in the case where any abnormality such as slackness or play is found, they are to be immediately fastened again or the bicycle should be turned in to the shop of purchase for maintenance and checks
- g) Warning of the effect that the carrier shall not be modified or remodelled
- h) Advice of the effect the carrier is designed to be capable of pulling a trailer
- i) Notice that, when loading luggage on the carrier, reflectors and lamps shall not be obscured by the loaded luggage

14.2 Instruction manual for stands

The following information shall be included in the instruction manual for stands.

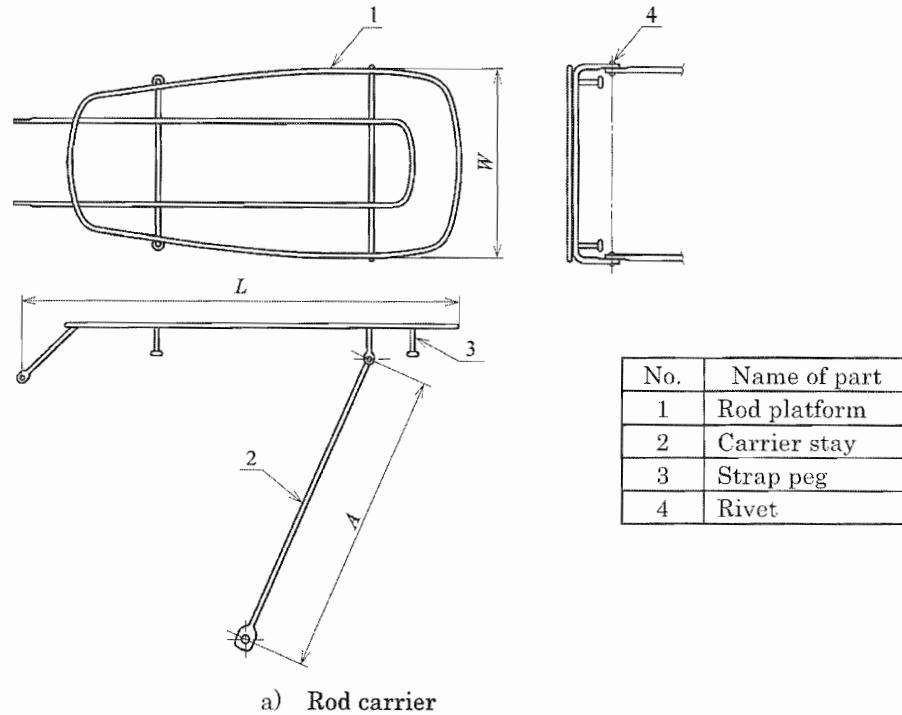
- a) Mounting method and mounting position of the stand on the bicycle and recommended torque for fasteners.
- b) Warning that the child-seat should not be attached to the bicycles with single prop stands.
- c) Instruction of the effect that clamping parts shall be fastened securely and checked frequently.

Table 4 Dimensions of carriers and stands

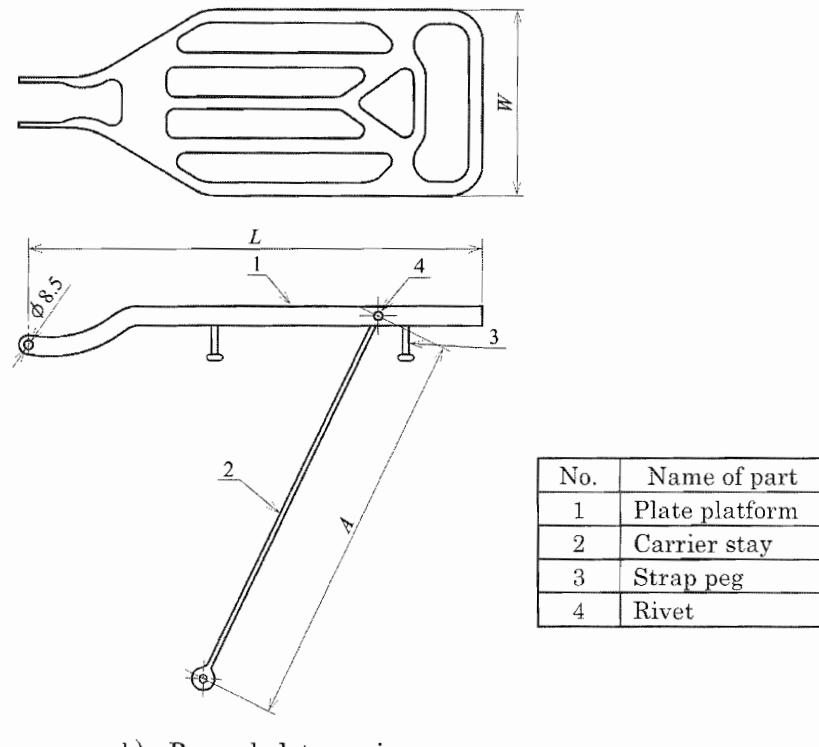
Nominal wheel diameter	Carrier	Full stand		Single prop stand	Unit : mm
		A	B	C	
14	235		205	200	175
16	260		230	200	205
18	285		255	200	235
20	310		280	230	265
22	335		305	230	295
24	360		330		325
25	375		345		340
26	385		355		355
27	400		370		370
28	410		380		385

NOTE : The dimension symbols A shall be as shown in figure 4, B and C in figure 5 and D in figure 6.

Unit : mm



a) Rod carrier

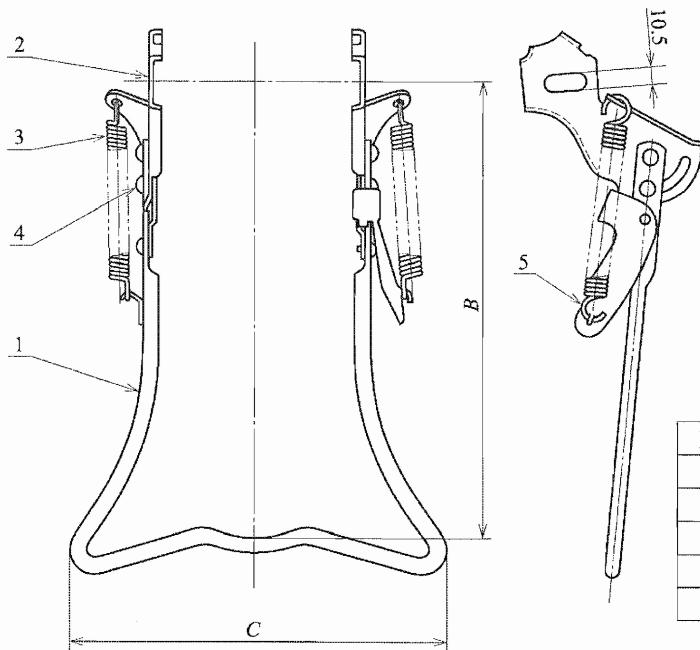


b) Pressed plate carrier

NOTE : The values of dimension A shall be as shown in table 4.

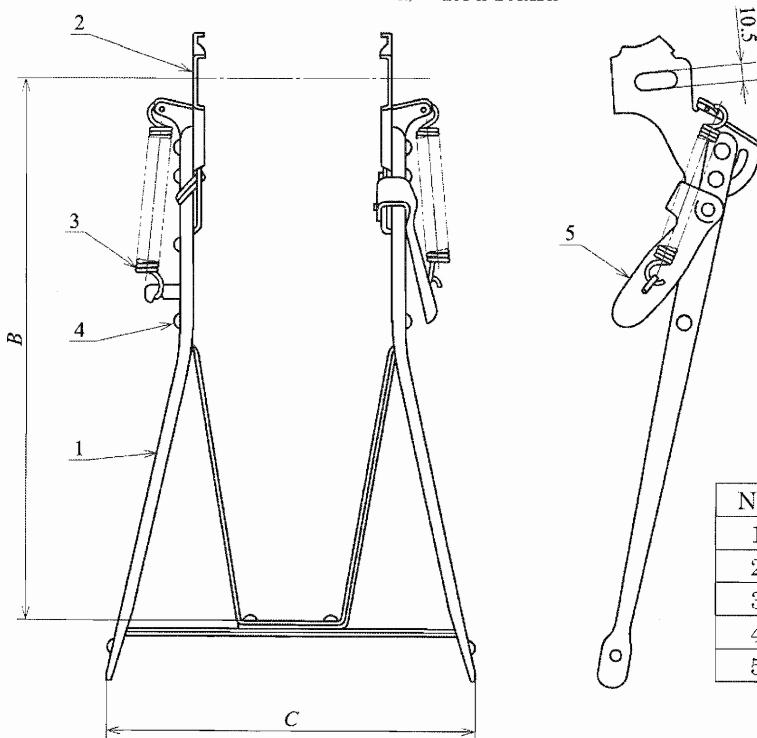
Figure 4 Carrier

Unit : mm



No.	Name of part
1	Rod stand prop
2	Stand fitting plate
3	Stand spring
4	Rivet
5	Stand lock

a) Rod stand

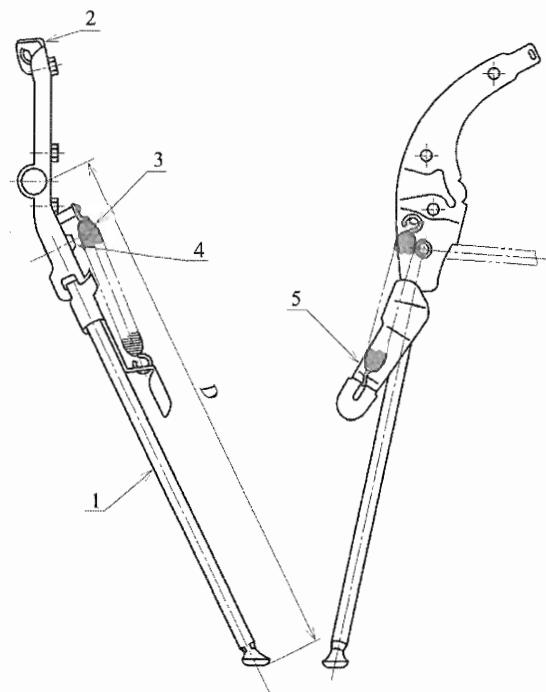


No.	Name of part
1	Plate stand prop
2	Stand fitting plate
3	Stand spring
4	Rivet
5	Stand lock

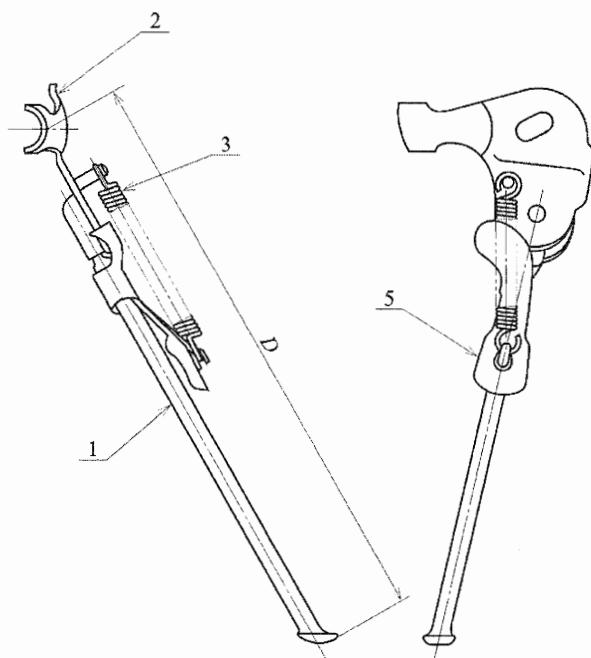
b) Pressed plate stand

NOTE : The values of dimensions B and C shall be as shown in table 4.

Figure 5 Stand (full stand)



a) Frame fixation type



No.	Name of part
1	Rod stand prop
2	Stand fitting plate
3	Stand spring
4	Rivet
5	Stand lock

b) Axle fixation type

NOTE : The values of dimension D shall be as shown in table 4.

Figure 6 Stand (single prop stand)

Annex JA (informative)

Comparison table between JIS and corresponding International Standard

JIS D 9453 : 2010 <i>Bicycles — Luggage carriers and stands</i>				ISO 11243 : 1994 <i>Cycles — Luggage carriers for bicycles — Concepts, classification and testing</i>			
(I) Requirements in JIS		(II) International Standard number	(III) Requirements in International Standard		(IV) Classification and details of technical deviation between JIS and the International Standard by clause		(V) Justification for the technical deviation and future measures
Clause and title of clause	Content		No. of clause	Content	Classification by clause	Detail of technical deviation	
1 Scope	The luggage carriers and the stands that are used for bicycles for general use, bicycles for young children and motor assisted cycles are specified.		1	The luggage carriers intended for mounting above the rear wheels of bicycles are specified. For stands, there is no corresponding International Standard.	Addition	JIS added the specification for stands.	This addition will be suggested at the time of review of the ISO standard.
2 Normative references							
3 Terms and definitions	carrier, carrier platform, length of carrier, full stand, single prop stand.		3	carrier, carrier platform, length of carrier.	Addition	JIS added the terms defined in JIS D 9101 and the terms of stands.	JIS defines additional terms because unified designation of parts is important.

(I) Requirements in JIS		(II) International Standard number	(III) Requirements in International Standard		(IV) Classification and details of technical deviation between JIS and the International Standard by clause		(V) Justification for the technical deviation and future measures
Clause and title of clause	Content		No. of clause	Content	Classification by clause	Detail of technical deviation	
4 Names of parts	The names of principal parts are specified.		-	-	Addition	Names of parts not specified in JIS D 9101 are specified.	JIS specifies names of each part to avoid confusion between consumers and manufacturers. This creates no substantial deviation.
5 Classification of carriers	Carriers are classified into five load classes according to the maximum loading mass. For attachment of child-seat, the total of mass of the child-seat and the maximum applicable body weight designated by the child-seat is specified.		4	Four load classes of carriers are specified. Requirements for attachment of child-seats for 15 kg and 22 kg capacity are given.	Alteration	JIS considers child-seats of mass up to 3 kg, and added Class 27, thus altering the ISO requirements for attachment of child-seats.	JIS altered the requirements for attachment of child-seats for the purpose of consistency between loading of luggage and children.
6 Strength	The strength of carrier and stand is specified.		-	-	Addition	JIS added concrete requirements.	Necessary for conformity assessment. This addition will be suggested at the next review of ISO standard.
7 Construction and function	Construction and function of carriers and stands are specified.		-	Not specified. For stands, there is no corresponding International Standard.	Addition	In JIS, it is specified that every joint, fixing and assembly shall be secure.	JIS added specifications in order to ensure the safety and quality.

(I) Requirements in JIS		(II) International Standard number	(III) Requirements in International Standard		(IV) Classification and details of technical deviation between JIS and the International Standard by clause		(V) Justification for the technical deviation and future measures
Clause and title of clause	Content		No. of clause	Content	Classification by clause	Detail of technical deviation	
8 Shapes and dimensions	Examples of shapes and main dimensions of carriers and stands are described.		6.2	The platform widths of load classes to which a child-seat can be attached are specified. For stands, there is no corresponding International Standard.	Addition	JIS gives, in addition to the specification of ISO standard, examples of shapes and main dimensions.	JIS gives additional descriptions in consideration of convenience of users.
9 Plating	Quality of the plated part of carriers and stands is specified.		10	Salt spray test is specified.	Alteration	In JIS, the plated part and the painted part are specified separately.	JIS specifies the two separately in order to ensure the quality.
10 Painting	Quality of the painted part of carriers and stands is specified.		10	Salt spray test is specified.	Alteration	In JIS, the plated part and the painted part are specified separately.	JIS specifies the two separately in order to ensure the quality.
11 Appearance	Appearance of carriers and stands is specified.		6.1	Requirement concerning sharp edges are given. For stands, there is no corresponding International Standard.	Addition	JIS gives requirements of appearance such as that related to rust, cracks and marks.	JIS added this specification to ensure the quality.

(I) Requirements in JIS		(II) International Standard number	(III) Requirements in International Standard		(IV) Classification and details of technical deviation between JIS and the International Standard by clause		(V) Justification for the technical deviation and future measures
Clause and title of clause	Content		No. of clause	Content	Classification by clause	Detail of technical deviation	
12 Test method 12.1.1 Temperature resistance	High temperature resistance test, low temperature resistance test and low temperature impact resistance test of carriers which use synthetic resin are specified.		7		Identical		
12.1.2 Static load strength	Static load strength tests in the vertical direction and in the lateral direction are specified.		6.4.2	Plastics materials shall be stabilized against UV radiation and resistant to ozone.	Deletion	In JIS, the subclause is deleted.	JIS does not have specifications on ultraviolet resistance and ozone resistance even for other synthetic resin parts of bicycles, and these matters will be studied by the next revision.
12.1.3 Dynamic load strength	Dynamic load strength tests in the vertical direction and in the lateral direction are specified.		8		Identical		
12.2 Test method for strength of stand	Repeating operation fatigue test, static load strength of full stand and static load strength of single prop stand are specified.		9		Identical		
			—	For stands, there is no corresponding International Standard.	Addition	JIS added the requirements for stands.	This addition will be suggested at the next revision of ISO.

(I) Requirements in JIS		(II) International Standard number	(III) Requirements in International Standard		(IV) Classification and details of technical deviation between JIS and the International Standard by clause		(V) Justification for the technical deviation and future measures
Clause and title of clause	Content		No. of clause	Content	Classification by clause	Detail of technical deviation	
13 Marking	Marking on carriers and stands is specified.		11	Marking of carriers is specified. For stands, there is no corresponding International Standard.	Addition	JIS added the marking requirements for stands.	JIS added the specification in order to ensure the safety of the product.
14 Instruction manual	Matters to be included in the instruction manual for carriers and stands are specified.		12	Matters to be included in the instruction manual for carriers are specified. For stands, there is no corresponding International Standard.	Addition	JIS specifies the matters to be included in the instruction manual for stands.	JIS added the specification in order to ensure the safety of the product.

Overall degree of correspondence between JIS and International Standard (ISO 11243 : 1994): MOD

NOTE 1 Symbols in sub-columns of classification by clause in the above table indicate as follows:

- Identical : Identical in technical contents.
- Deletion : Deletes the specification item(s) or content(s) in International Standard.
- Addition : Adds the specification item(s) or content(s) which are not included in International Standard.
- Alteration : Alters the specification content(s) which are included in International Standard.

NOTE 2 Symbol in column of overall degree of correspondence between JIS and International Standard in the above table indicates as follows:

- MOD : Modifies International Standard.

Errata for JIS (English edition) are printed in *Standardization and Quality Control*, published monthly by the Japanese Standards Association, and also provided to subscribers of JIS (English edition) in *Monthly Information*.

Errata will be provided upon request, please contact:
Standards Publishing Department, Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN
TEL. 03-3583-8002 FAX. 03-3583-0462